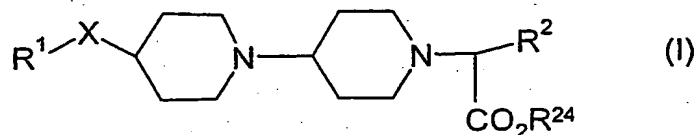


CLAIMS

1. A compound of formula (I):



wherein:

X is CH₂, C(O), O, S, S(O), S(O)₂ or NR³;

R¹ is hydrogen, C₁₋₆ alkyl, aryl or heterocyclyl;

R² is C₃₋₇ cycloalkyl {optionally substituted by C₁₋₄ alkyl, aryl or oxo}, C₃₋₇

cycloalkenyl {optionally substituted by oxo, C₁₋₆ alkyl or aryl}, aryl or

heterocyclyl;

wherein the foregoing aryl and heterocyclyl moieties are optionally substituted by:

halogen, cyano, nitro, hydroxy, oxo, S(O)_pR⁴, OC(O)NR⁵R⁶, NR⁷R⁸, NR⁹C(O)R¹⁰,

NR¹¹C(O)NR¹²R¹³, S(O)₂NR¹⁴R¹⁵, NR¹⁶S(O)₂R¹⁷, C(O)NR¹⁸R¹⁹, C(O)R²⁰, CO₂R²¹,

NR²²CO₂R²³, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, C₁₋₆ alkoxy, C₁₋₆

haloalkoxy, C₁₋₆ alkoxy(C₁₋₆)alkoxy, C₁₋₆ alkylthio, C₁₋₆ haloalkylthio, C₂₋₆ alkenyl,

C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl (itself optionally substituted by C₁₋₄ alkyl or oxo),

methylenedioxy, difluoromethylenedioxy, phenyl, phenyl(C₁₋₄)alkyl, phenoxy,

phenylthio, phenyl(C₁₋₄)alkoxy, heterocyclyl, heterocyclyl(C₁₋₄)alkyl,

heterocyclioxy or heterocyclyl(C₁₋₄)alkoxy; wherein any of the immediately

foregoing phenyl and heterocyclyl moieties are optionally substituted with halogen,

hydroxy, nitro, S(O)_q(C₁₋₄ alkyl), S(O)₂NH₂, cyano, C₁₋₄ alkyl, C₁₋₄ alkoxy,

C(O)NH₂, C(O)NH(C₁₋₄ alkyl), C(O)N(C₁₋₄ alkyl)₂ (and these alkyl groups may join

to form a ring as described for R⁵ and R⁶ below), CO₂H, CO₂(C₁₋₄ alkyl),

NHC(O)(C₁₋₄ alkyl), NHS(O)₂(C₁₋₄ alkyl), C(O)(C₁₋₄ alkyl), CF₃ or OCF₃;

p and q are, independently, 0, 1 or 2;

R³, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁸, R¹⁹, R²⁰, R²¹ and R²² are,

independently, hydrogen, C₁₋₆ alkyl (optionally substituted by halogen, hydroxy or

C₃₋₁₀ cycloalkyl), CH₂(C₂₋₆ alkenyl), phenyl (itself optionally substituted by

halogen, hydroxy, nitro, NH₂, NH(C₁₋₄ alkyl), N(C₁₋₄ alkyl)₂, S(O)₂(C₁₋₄ alkyl),

S(O)₂NH₂, cyano, C₁₋₄ alkyl, C₁₋₄ alkoxy, C(O)NH₂, C(O)NH(C₁₋₄ alkyl),

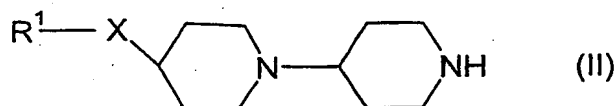
C(O)N(C₁₋₄ alkyl)₂ (and these alkyl groups may join to form a ring as described for

R^5 and R^6 below), CO_2H , $\text{CO}_2(\text{C}_{1-4} \text{ alkyl})$, $\text{NHC}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, $\text{NHS}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, CF_3 or OCF_3) or heterocyclyl (itself optionally substituted by halogen, hydroxy, nitro, NH_2 , $\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{N}(\text{C}_{1-4} \text{ alkyl})_2$, $\text{S}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{S}(\text{O})_2\text{NH}_2$, $\text{S}(\text{O})_2\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{S}(\text{O})_2\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 below), cyano, $\text{C}_{1-4} \text{ alkyl}$, $\text{C}_{1-4} \text{ alkoxy}$, $\text{C}(\text{O})\text{NH}_2$, $\text{C}(\text{O})\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 below), CO_2H , $\text{CO}_2(\text{C}_{1-4} \text{ alkyl})$, $\text{NHC}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, $\text{NHS}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, CF_3 or OCF_3); alternatively NR^5R^6 , NR^7R^8 , $\text{NR}^{12}\text{R}^{13}$, $\text{NR}^{14}\text{R}^{15}$, $\text{NR}^{18}\text{R}^{19}$, may, independently, form a 4-7 membered heterocyclic ring, azetidine, pyrrolidine, piperidine, azepine, 1,4-morpholine or 1,4-piperazine, the latter optionally substituted by $\text{C}_{1-4}\text{alkyl}$ on the distal nitrogen;

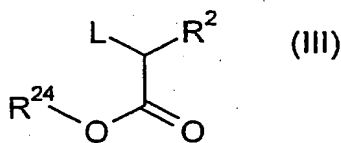
R^4 , R^{17} and R^{23} are, independently, $\text{C}_{1-6} \text{ alkyl}$ (optionally substituted by halogen, hydroxy or $\text{C}_{3-10} \text{ cycloalkyl}$), $\text{CH}_2(\text{C}_{2-6} \text{ alkenyl})$, phenyl (itself optionally substituted by halogen, hydroxy, nitro, NH_2 , $\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 above), $\text{S}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{S}(\text{O})_2\text{NH}_2$, $\text{S}(\text{O})_2\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{S}(\text{O})_2\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 above), cyano, $\text{C}_{1-4} \text{ alkyl}$, $\text{C}_{1-4} \text{ alkoxy}$, $\text{C}(\text{O})\text{NH}_2$, $\text{C}(\text{O})\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 above), CO_2H , $\text{CO}_2(\text{C}_{1-4} \text{ alkyl})$, $\text{NHC}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, $\text{NHS}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, CF_3 or OCF_3) or heterocyclyl (itself optionally substituted by halogen, hydroxy, nitro, NH_2 , $\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 above), $\text{S}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{S}(\text{O})_2\text{NH}_2$, $\text{S}(\text{O})_2\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{S}(\text{O})_2\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 above), cyano, $\text{C}_{1-4} \text{ alkyl}$, $\text{C}_{1-4} \text{ alkoxy}$, $\text{C}(\text{O})\text{NH}_2$, $\text{C}(\text{O})\text{NH}(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})\text{N}(\text{C}_{1-4} \text{ alkyl})_2$ (and these alkyl groups may join to form a ring as described for R^5 and R^6 above), CO_2H , $\text{CO}_2(\text{C}_{1-4} \text{ alkyl})$, $\text{NHC}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, $\text{NHS}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$, $\text{C}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, CF_3 or OCF_3);

R^{24} is hydrogen, $\text{C}_{1-6} \text{ alkyl}$ or benzyl; or an N-oxide thereof; or a pharmaceutically acceptable salt thereof; or a solvate thereof.

2. A compound of formula (I) as claimed in claim 1 wherein X is O.
3. A compound of formula (I) as claimed in claim 1 or 2 wherein R²⁴ is hydrogen.
4. A compound of formula (I) as claimed in claim 1, 2 or 3 wherein R¹ is phenyl optionally substituted with fluorine, chlorine, C₁₋₄ alkyl or C₁₋₄ alkoxy.
5. A compound of formula (I) as claimed in claim 1, 2, 3 or 4 wherein R² is phenyl or heterocyclyl, either of which is optionally substituted by: halo, hydroxy, nitro, cyano, amino, C₁₋₄ alkyl (itself optionally substituted by S(O)₂(C₁₋₄ alkyl) or S(O)₂phenyl), C₁₋₄ alkoxy, S(O)_pR⁴ (wherein p is 0, 1 or 2), C(O)NH₂, NHS(O)₂(C₁₋₄ alkyl), S(O)₂NH₂, S(O)₂NH(C₁₋₄ alkyl) or S(O)₂N(C₁₋₄ alkyl)₂; and R⁴ is C₁₋₄ alkyl, C₁₋₄ hydroxyalkyl, C₃₋₇ cycloalkyl or C₃₋₇ cycloalkyl(C₁₋₄ alkyl).
6. A process for preparing a compound of formula (I) as claimed in claim 1, the process comprising:
 - i. coupling a compound of formula (II):

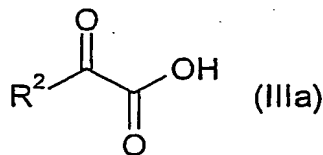


with a compound of formula (III):



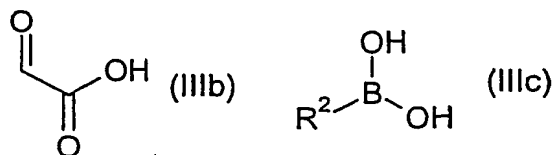
wherein L is a suitable leaving group, in a suitable solvent; or,

- ii. reductive amination of a compound (II) with an ester compound of formula (IIIa):



in the presence of NaBH(OAc)₃ and acetic acid, followed optionally by removal of the ester group; or

- iii. a three component coupling of a compound of formula (II) with compounds of formula (IIIb) and (IIIc):



- 5 7. A pharmaceutical composition which comprises a compound of the formula (I), or a pharmaceutically acceptable salt thereof or solvate thereof as claimed in claim 1, and a pharmaceutically acceptable adjuvant, diluent or carrier.
- 10 8. A compound of the formula (I), or a pharmaceutically acceptable salt thereof or solvate thereof as claimed in claim 1, for use in therapy.
- 15 9. A compound of formula (I), or a pharmaceutically acceptable salt thereof or solvate thereof as claimed in claim 1, in the manufacture of a medicament for use in therapy.
- 20 10. A method of treating a chemokine mediated disease state in a mammal suffering from, or at risk of, said disease, which comprises administering to a mammal in need of such treatment a therapeutically effective amount of a compound of formula (I), or a pharmaceutically acceptable salt thereof or solvate thereof as claimed in claim 1.